Name: Period:

**Watershed Land Changes Through History – Activity**

Calculate Areas of Land Coverage

1 square = 1 km^2

360 squares total = 360 km^2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Map A**  100 yrs. ago | **Map A**  100 yrs. ago | **Map B**  50 yrs. ago | **Map B**  50 yrs. ago | **Map C**  Present | **Map C**  Present |
| **Land Coverage** | km^2 | % | km^2 | % | km^2 | % |
| Forest |  |  |  |  |  |  |
| Grassland |  |  |  |  |  |  |
| Wetland |  |  |  |  |  |  |
| Residential |  |  |  |  |  |  |
| Agriculture |  |  |  |  |  |  |
| Stream |  |  |  |  |  |  |

Analysis Portion:

1. What happens to the amount of forested land as you go from Map A to Map C?
2. Which map has the most land devoted to human settlements?
3. Where are most of the human settlements located?
4. What effect might these human settlements have on the watershed?
5. Would you have handled development differently? Why or why not?
6. Circle which land cover you think absorbs more water. (concrete, forest, wetlands, or grasslands)
7. Which map do you think represents the watershed that is able to capture and store the most water? Why?
8. What problems could arise if water runs quickly over surface material, rather than moving slowly or soaking in? Why?
9. How might the water quality of the stream be affected by changes in the watershed?

Name: KEY Period:

**Watershed Land Changes Through History – Activity**

Calculate Areas of Land Coverage

1 square = 1 km^2

360 squares total = 360 km^2

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Map A**  100 yrs. ago | **Map A**  100 yrs. ago | **Map B**  50 yrs. ago | **Map B**  50 yrs. ago | **Map C**  Present | **Map C**  Present |
| **Land Coverage** | km^2 | % | km^2 | % | km^2 | % |
| Forest | **189** | **52.5** | **162** | **45** | **111** | **30.8** |
| Grassland | **20** | **5.6** | **14** | **3.9** | **6** | **1.7** |
| Wetland | **17** | **4.7** | **13** | **3.6** | **5** | **1.4** |
| Residential | **13** | **3.6** | **33** | **9.2** | **58** | **16.1** |
| Agriculture | **10** | **2.8** | **27** | **7.5** | **69** | **9.2** |
| Stream | **111** | **30.8** | **111** | **30.8** | **111** | **30.8** |

Analysis Portion:

1. What happens to the amount of forested land as you go from Map A to Map C?

**The amount drops by 78 km^2 or 21.7%**

1. Which map has the most land devoted to human settlements?

**Map C**

1. Where are most of the human settlements located?

**Most residential locations are found along the stream.**

1. What effect might these human settlements have on the watershed?

**Any contaminants from these settlements would flow right into the watershed.**

1. Would you have handled development differently? Why or why not?

**I think it’s important to leave nature as is, but if I were to re-develop the land, I would place the human settlements as far away from the waterways, as possible.**

1. Circle which land cover you think absorbs more water. (concrete, **forest**, **wetlands**, or grasslands)
2. Which map do you think represents the watershed that is able to capture and store the most water? Why?

**Map A – It has the most forested land cover. As you continue through the other maps, forested land decreases due to human settlements**

1. What problems could arise if water runs quickly over surface material, rather than moving slowly or soaking in? Why?

**If water flies over the surface too quickly, it takes everything with it and immediately drains into the water systems. All contaminants and runoff head into the waterways, leaving devastation in the waters.**

1. How might the water quality of the stream be affected by changes in the watershed?

**With increases of humans, as well as their settlements, bring more devastation, specifically with respect to pollution and contaminants. All these contaminants will then eventually runoff into the waterways located nearby.**